THE CLAIMS

What is claimed is:

1. A bone portion securing device adapted to be received within a bone cavity, the device including at least one portion capable of being radially expanded under an applied force, the at least one expansion portion having at least one portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one other portion of the portion.

2. A bone portion securing device according to claim 1, wherein the at least one characteristic comprises a thickness and/or width of the at least one part and the at least one other part.

3. A bone portion securing device according to claim 1, wherein the expansion portion comprises at least one elongate portion having a pair of elongate slots on either side thereof.

4. A bone portion securing device according to claim 1, wherein the at least one portion comprises a first end of the at least one elongate portion and a second end of at least one elongate portion.

5. A bone portion securing device according to claim 4, wherein the at least one other part comprises a mid portion of the elongate portion forming a remainder of the elongate portion.

6. A bone portion securing device according to claim 4, wherein the first end and/or second end of the elongate portion is thinner or thicker and/or narrower or broader than an adjacent portion of the at least one elongate portion.

7. A bone portion securing device according to claim 1, wherein the at least one portion may comprise or further comprise a first end of at least one slot, and a second end of at least one slot.

8. A bone portion securing device according to claim 7, wherein the at least one other part comprises a mid portion of the slot forming a remainder of the slot.

9. A bone portion securing device according to claim 1, wherein the first end and/or the second end of at least one slot is broader than an adjacent portion of the at least one slot.

10. A bone securing device adapted to be received within a bone cavity, the device including at least one portion capable of being radially expanded under an applied force, wherein the at least one expansion portion is shaped to elastically bow outwards when a compressive force is applied axially to the expansion member.

11. A bone securing device adapted to be received within a bone cavity, the device including at least one portion capable of being radially expanded under an applied force, wherein the at least one expansion portion comprises at least one longitudinal portion fixed at either end to means which engage a compression coupling, wherein the profile of the at least one longitudinal portion is narrowed at one or both ends of the at least one longitudinal portion.

12. A bone portion securing device according to claim 11, wherein a plurality of longitudinal portions substantially equidistant spaced around a circumference of the expansion module are provided.

13. A bone portion securing device according to claim 11, wherein the longitudinal portion has a stepped or curved profile.

14. A bone portion securing device according to claim 11, wherein the outer surface of the longitudinal portion is serrated to provide grip with the inner surface of a bone.

15. A bone portion securing device adapted to be received within a bone cavity, the device including at least one portion capable of being radially expanded under an applied force, wherein the at least one expansion portion includes at least one slot, the slot having at least one portion having a width greater than a width of a remainder of the at least one slot.

16. A bone portion securing device according to claim 15, wherein at least one portion and the remainder of the slot are longitudinally displaced.

17. A bone portion securing device according to claim 15, wherein the/each expansion portion includes a plurality of elongate slots.

18. A bone portion securing device according to claim 15, wherein the/each slot includes a first and second wider portions at first and second ends of the slot.

19. A bone portion securing device according to claim 18, wherein the remainder of the slot is substantially of a uniform width.

20. A bone portion securing device comprising

at least two expansion modules, said expansion module(s) being of substantially cylindrical unitary construction including a plurality of substantially longitudinal portions which, in use, are substantially lateral to a bone wall and which bow elastically outward when a compressive force is applied axially to the expansion module;

at least one compression coupling, said compression coupling including compressive attachment means to engage the expansion module(s) in a fixed position with respect to the compression coupling and being capable of transferring a compressive force; and

at least one compression means, said compression means being arranged to transfer a force, such as a rotational force, applied to at least one portion of a surface of the compression means to a compressive force applied to the at least one compression coupling.

21. A bone portion securing device according to

claim 20, wherein the plurality of longitudinal portions are substantially equidistantly spaced around a circumference of the expansion module(s) and are separated from each other by an elongate slot (expansion apertures).

22. A bone portion securing device according to claim 20, wherein the/each elongate slot have chamfered edges.

23. A bone portion securing device according to claim 20, wherein one or both ends of the/each slot are rounded in longitudinal cross-section.

24. A bone portion securing device according to claim 20, wherein the longitudinal portions are loaded by having a stepped or curved surface profile.

25. A bone portion securing device according to claim 20, wherein the compressive attachment means of the compression coupling is in the form of a self-locking ratchet.

26. A bone portion securing device according to claim 20, wherein the attachment means includes at least two anti-rotation grooves which engage a portion of an

expansion module such that the expansion module cannot rotate with respect to the compression coupling.

27. A bone portion securing device according to any claim 1, wherein the expansion module is made of a stiffly resilient plastics material, titanium or titanium alloy.

28. An expansion module for use as a portion of a bone portion securing device adapted to be received within a bone cavity, the module including at least one portion capable of being radially expanded under an applied force, the at least one expansion portion having at least one portion, at least one characteristic of which is selected to be different to a corresponding at least one characteristic of at least one other portion of the portion.